



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE

FRIDAY, JUNE 4, 1920

CONTENTS

<i>The Effect of the War on the Chief Factors of Population Change</i> : PROFESSOR RAYMOND PEARL	553
<i>Colored Photographs of Plant Disease Specimens</i> : DRS. MAX W. GARDNER AND GEO. K. K. LINK	556
<i>William Dixon Weaver</i> : WILLIAM E. KEELY..	558
<i>State Grants for Scientific Investigations in England</i>	559
<i>Scientific Events:—</i>	
<i>The Manufacture of Synthetic Ammonia in England; Spanish Edition of the Journal of the American Medical Association; Grants for Research made by The American Association for the Advancement of Science</i>	562
<i>Scientific Notes and News</i>	566
<i>University and Educational News</i>	566
<i>Discussion and Correspondence:—</i>	
<i>Renewal of our Relations with the Scientific Men of Europe</i> : DR. HENRY FAIRFIELD OSBORN. <i>The Meteor of November 26, 1919</i> : WILLIAM KELLY. <i>Formulae for Dates</i> : DR. W. J. SPILLMAN. <i>The Library of the late Professor Zuntz</i> : PROFESSOR YANDELL HENDERSON	567
<i>Quotations:—</i>	
<i>Work of the Mayo Brothers</i>	569
<i>The Journal of Mammalogy</i> : PROFESSOR CHARLES E. JOHNSON	569
<i>Special Articles:—</i>	
<i>Fluorescence, Dissociation and Ionization in Iodine Vapors</i> : DRS. K. T. COMPTON AND H. D. SMYTH	571
<i>The American Philosophical Society</i> : PROFESSOR ARTHUR GOODSPEED	572

MSS. intended for publication and books, etc., intended for review should be sent to The Editor of Science, Garrison-on-Hudson, N. Y.

THE EFFECT OF THE WAR ON THE CHIEF FACTORS OF POPULATION CHANGE¹

THERE have recently appeared some figures² regarding the "mouvement de la population" in France, Prussia and Bavaria which appear to deserve somewhat more careful analysis than they have received. These figures are derived from official sources and are conveniently collected in the place to which I have made reference.

There are three factors fundamentally concerned in producing changes in the absolute size of the population in a given fixed area (country, province, etc.). These are:

1. The birth-rate,
2. The death-rate,
3. The net immigration rate.

Of these factors the two first are, generally speaking, of the greatest biological interest. This is particularly true of such political units as France, Prussia and Bavaria, where in normal times net immigration makes no significant contribution to the population. Under war conditions permanent immigration to these units was *nil* and may therefore be safely neglected in the following discussion.

The relation of birth-rate and death-rate changes to population changes is a simple one and may be put this way. If in a given time unit the percentage

$$\frac{100 \text{ Deaths}}{\text{Births}}$$

has a value less than 100, it means that the births exceed the deaths, and that the population is increasing within the specified time

¹ Papers from the department of biometry and Vital statistics, School of Hygiene and Public Health, Johns Hopkins University, No. 14. This paper recently formed the basis of an evening's discussion at the writer's seminar.

² *Jour. Soc. Stat. Paris*, Soixantième Année, pp. 356-361, December, 1919.